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52

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,127	11/21/2001	Jeffrey H. Yanof	PII 3330	2796

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EXAMINER

SHAW, SHAWNA JEANNINE

ART UNIT	PAPER NUMBER
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3737

11

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/990,127

**Applicant(s)**

YANOF ET AL

**Examiner**

Shawna J. Shaw

**Art Unit**

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Charles et al.

Regarding claim 1, Charles et al. discloses a medical manipulator for use with an imaging device (col. 2 lines 3-15) including a mechanical arm assembly (e.g., fig. 3) and an end effector comprised of gripping means, or clamps, (e.g., 85) for selectively *locking* (i.e., an applied force preventing relative movement) and *releasing* (i.e., zero applied force) a medical instrument (col. 8 lines 47-54, col. 9 lines 32-39, col. 9 line 57 – col. 10 line 25).

Regarding claim 8, Charles et al. teach a method for performing image guided surgery (col. 1 lines 50-55) with a three-dimensional imaging device such as CT, MRI,

Art Unit: 3737

etc., planning a desired trajectory for the instrument based on the imaging data (col. 10 lines 49-64, col. 18 lines 52-65), gripping the surgical instrument with clamps (e.g., 85) and moving the instrument along the desired trajectory by alternately *grasping* and *releasing* the clamps. See col. 9 line 57 – col. 10 line 25.

Regarding claims 9 and 10, Charles et al. further teaches wherein the alternate grasping and releasing involves movement of clamp (85) away from the subject and re-gripping of the instrument to effect linear translation of the instrument (col. 10 lines 1-14).

### ***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-7 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Charles et al.

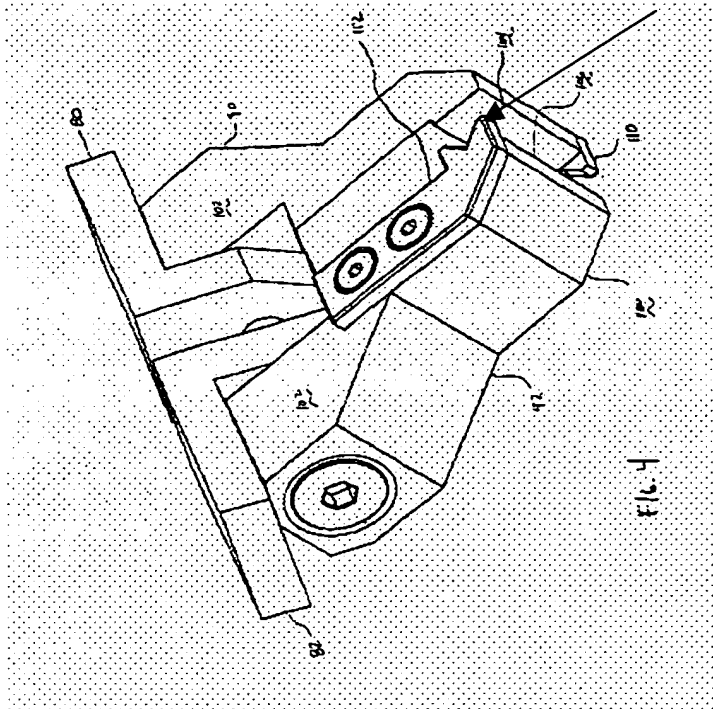
Regarding claims 2 and 5-7, Charles et al. discloses wherein the clamps have opposing portions, or blocks, each having instrument guides, or recesses, associated therewith. Although Charles et al. teaches clamps composed of opposed block portions, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use clamps composed of opposed finger portions because Applicant has not disclosed that finger portions provide an advantage, are used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicants' invention to perform equally well with the opposed block portions of Charles et al. or the claimed finger portions because both perform the same function of grasping and stabilizing the medical instrument. Further regarding claims 3 and 4, Charles et al. discloses incremental movement means (e.g., 80) for moving the instrument along a linear trajectory.

Regarding claims 11-13, Charles et al. teach gripping the instrument with first and second block portions each having gripping surfaces as well as instrument guides, or recesses, associated therewith to stabilize the instrument. Although Charles et al. teaches clamps composed of opposed block portions, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use clamps composed of opposed finger portions because Applicant has not disclosed that finger portions provide an advantage, are used for a

particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicants' invention to perform equally well with the opposed block portions of Charles et al. or the claimed finger portions because both perform the same function of grasping and stabilizing the medical instrument.

Regarding claim 14, Charles et al. teach a medical manipulator for use with a medical imaging system including: a volumetric imaging means (e.g., CT, MRI) and associated control means for planning an interventional procedure on a patient (col. 2 lines 9-26, col. 18 lines 52-65); a mechanical arm assembly (e.g., fig. 3), an end-effector comprised of clamps (e.g. 85) having first and second opposed block portions each having guides associated therewith. Although Charles et al. teaches clamps composed of opposed block portions, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use clamps composed of opposed finger portions because Applicant has not disclosed that finger portions provide an advantage, are used for a particular purpose, or solve a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicants' invention to perform equally well with the opposed block portions of Charles et al. or the claimed finger portions because both perform the same function of grasping and stabilizing the medical instrument. Regarding claim 15, Charles et al. discloses a mechanical arm controller (200). Regarding claims 16-18, Charles et al. further disclose wherein relative movement between the instrument and the end effector is controlled/tracked by a linear actuator (80). Regarding claim 19, the examiner

understands the prongs to be the opposite ends of the notches for guiding the instrument (see e.g. fig. 4 of applicants' application):



Charles et al. also teaches notches and corresponding end portions/prongs for stabilizing the instrument (see e.g., fig. 13):

